

FIG. 1

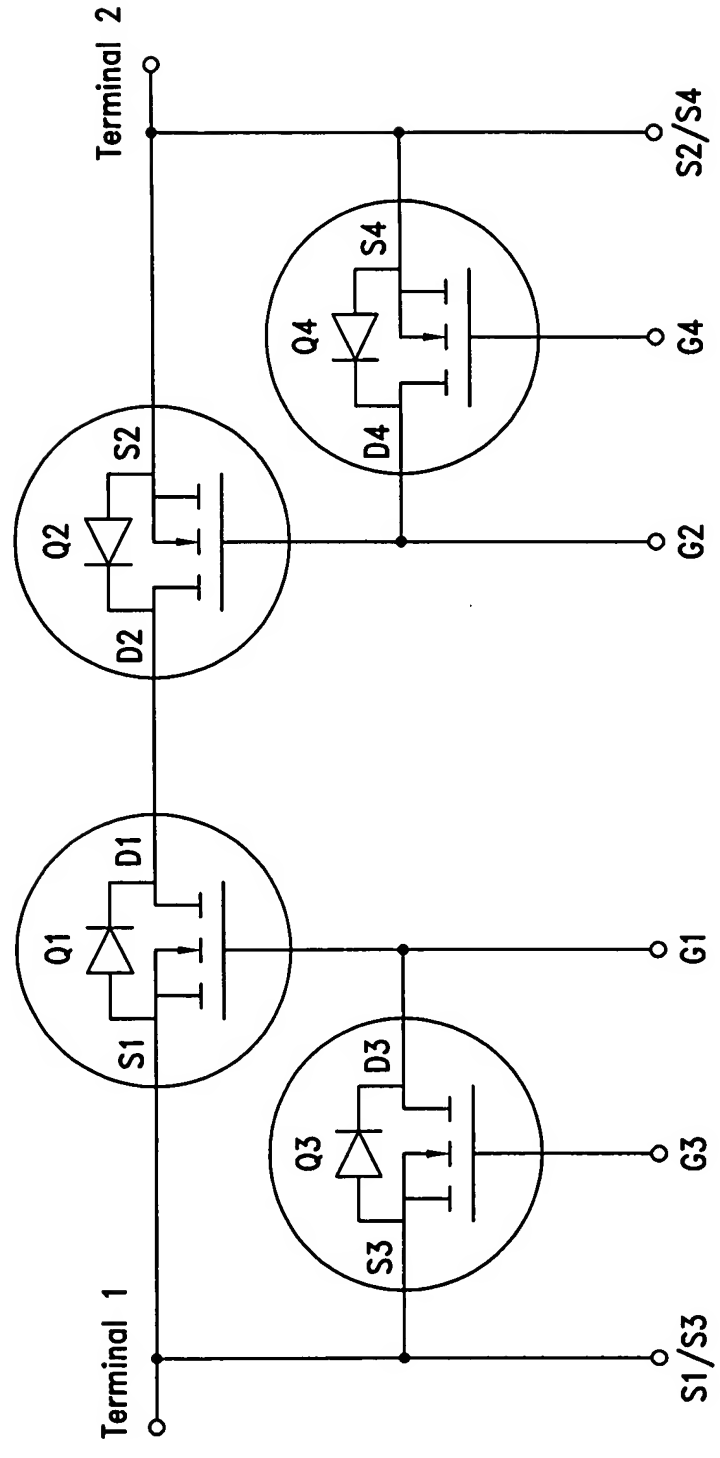


FIG. 2

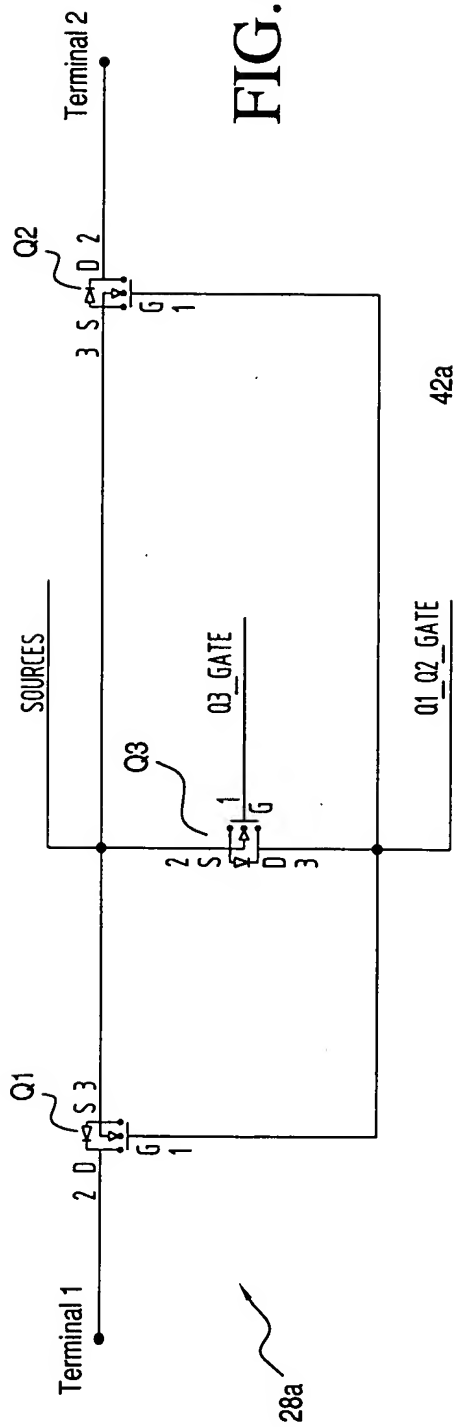


FIG. 2a

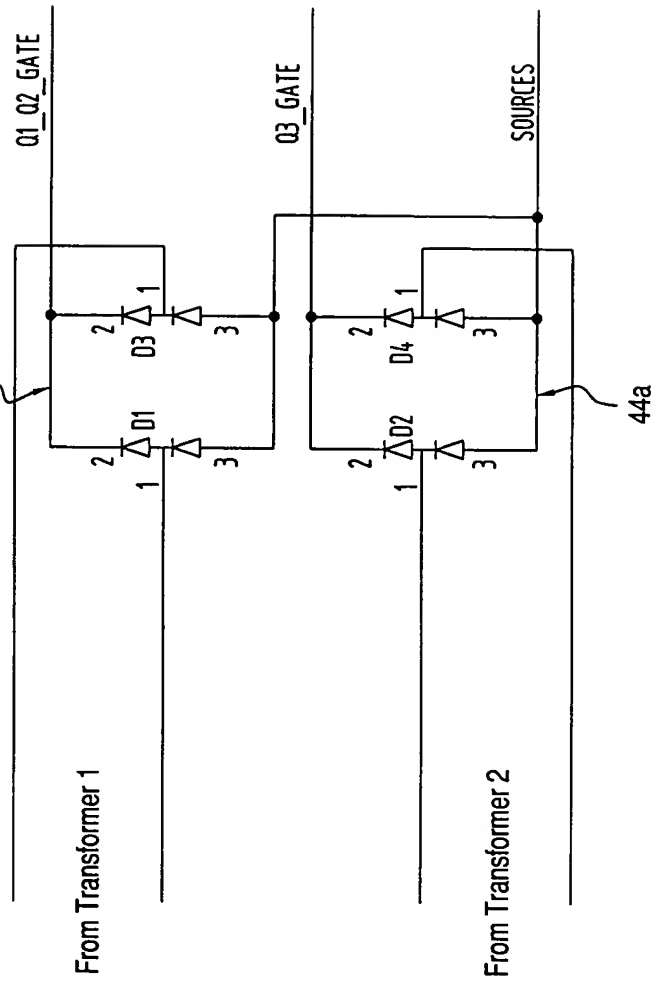


FIG. 3a

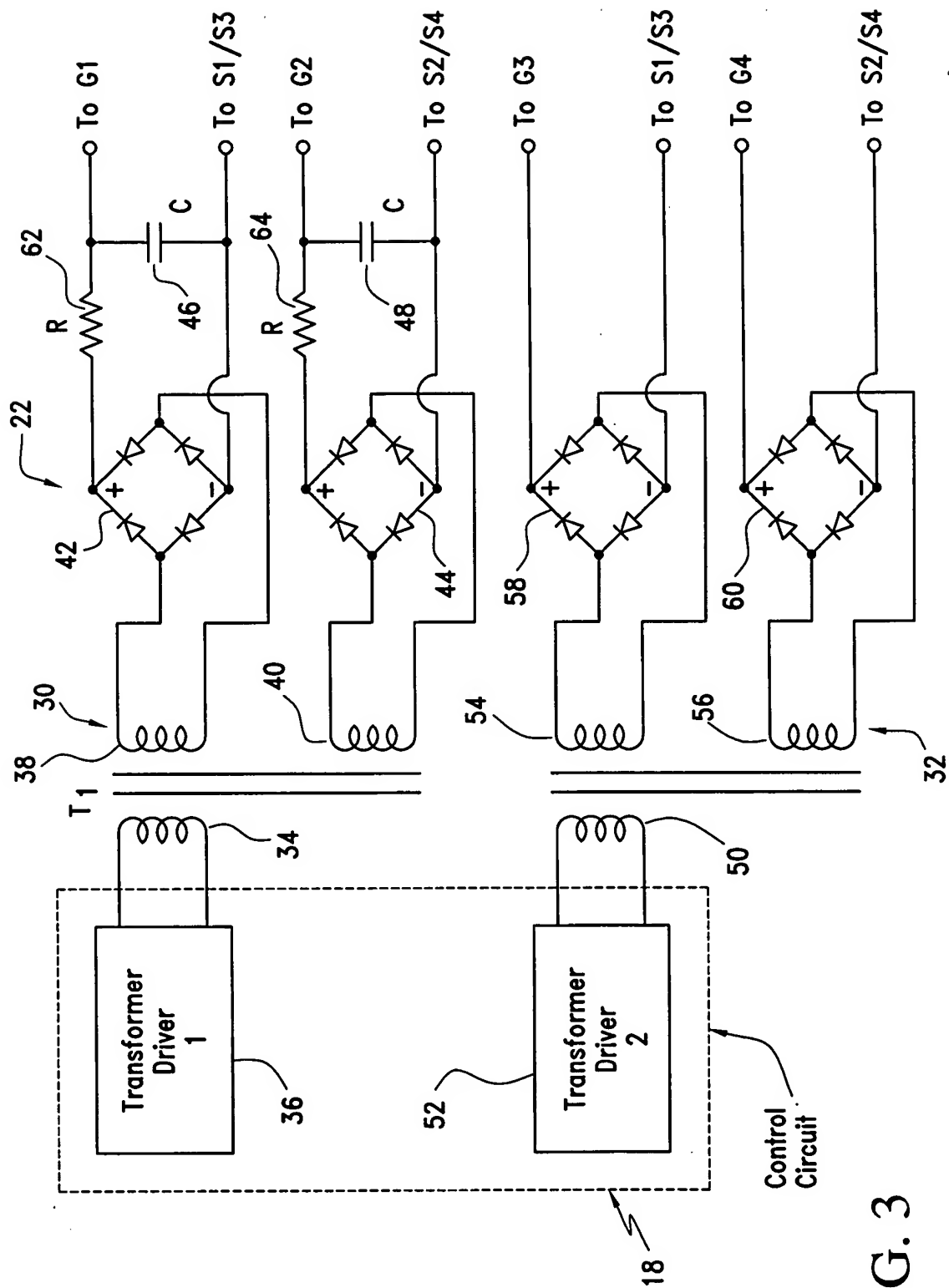


FIG. 3

FIG. 4

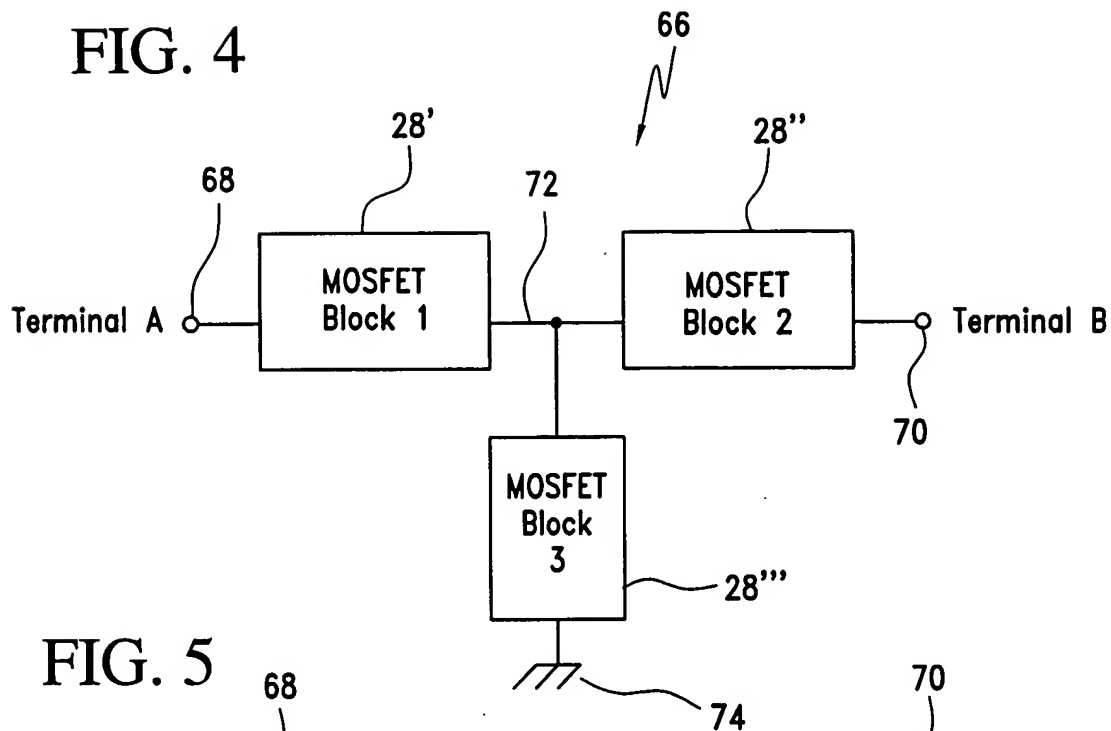


FIG. 5

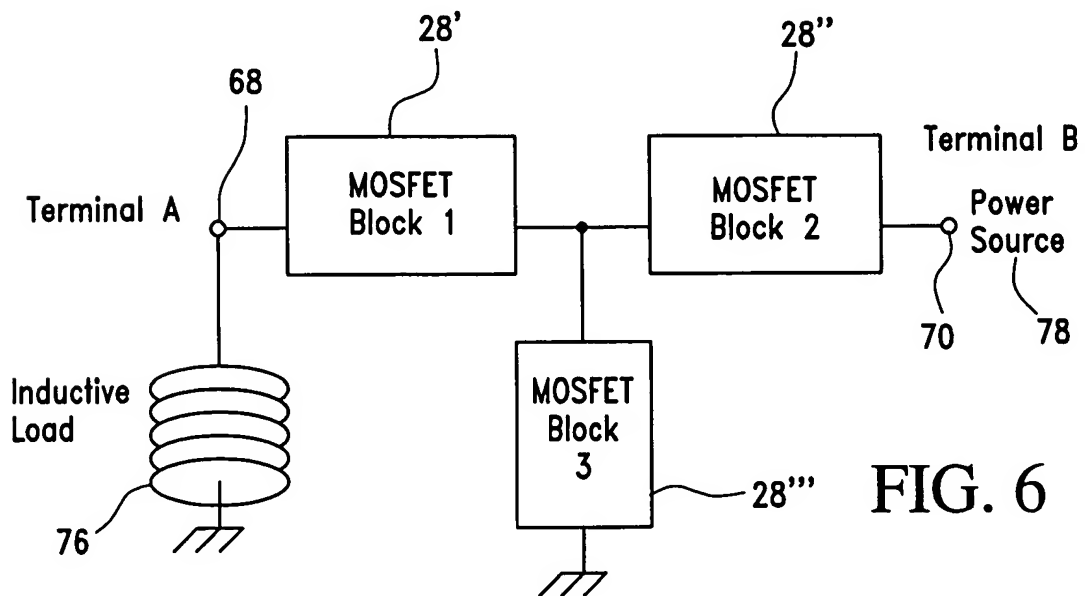
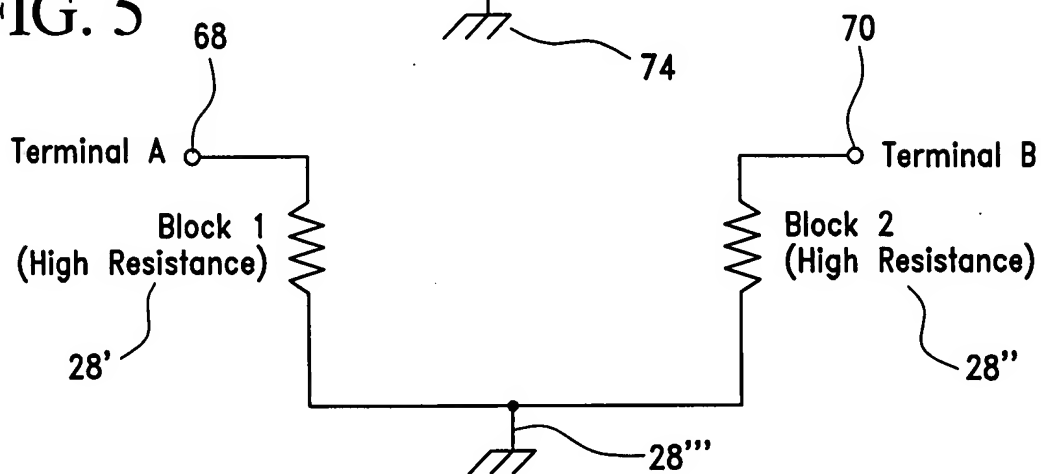
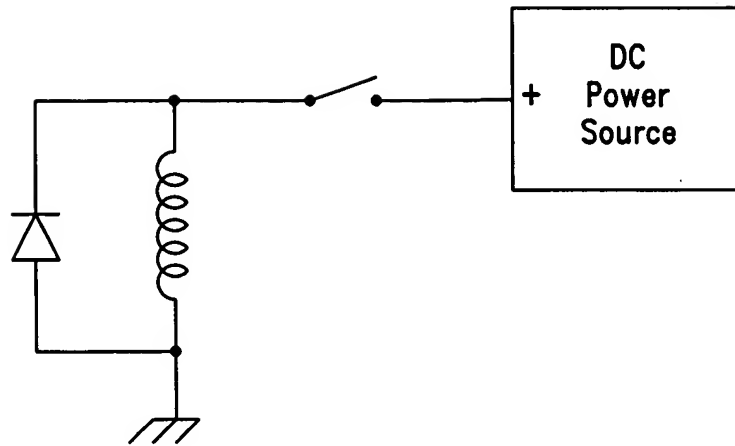
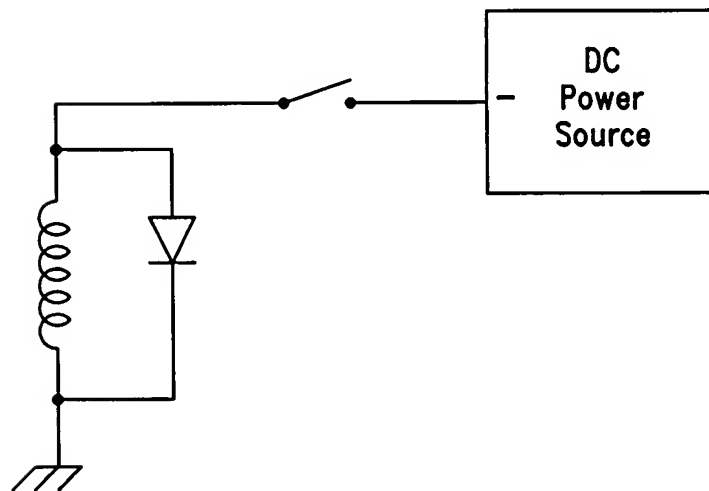


FIG. 6



Inductive load with positive power source  
and discharge (or flyback) diode

**FIG. 7**  
(PRIOR ART)



Inductive load with negative DC power source  
and discharge (or flyback) diode

**FIG. 7a**  
(PRIOR ART)

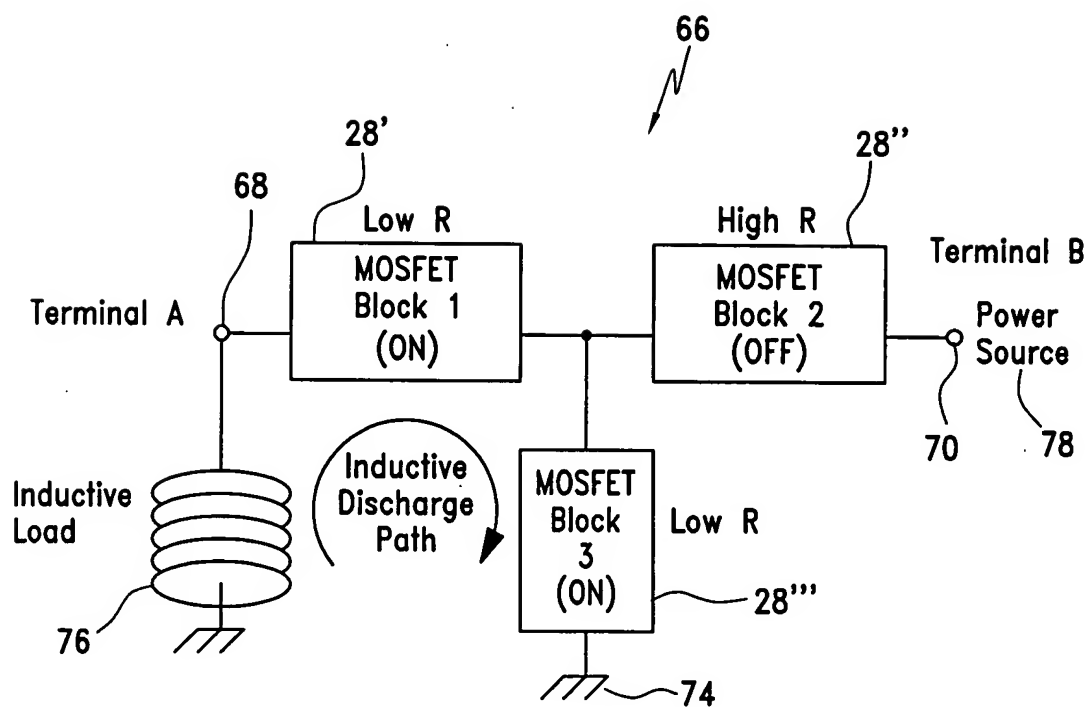


FIG. 8

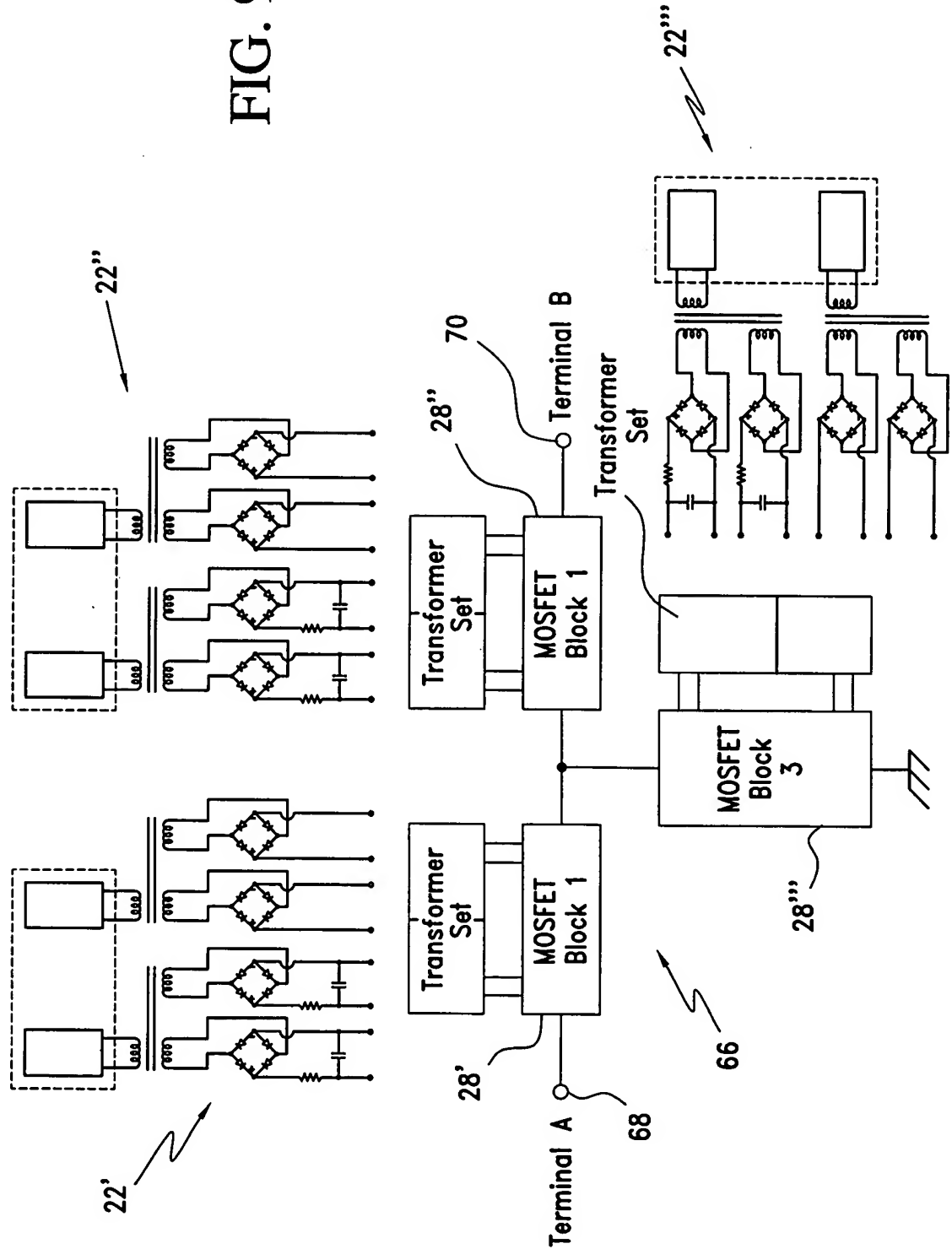


FIG. 9



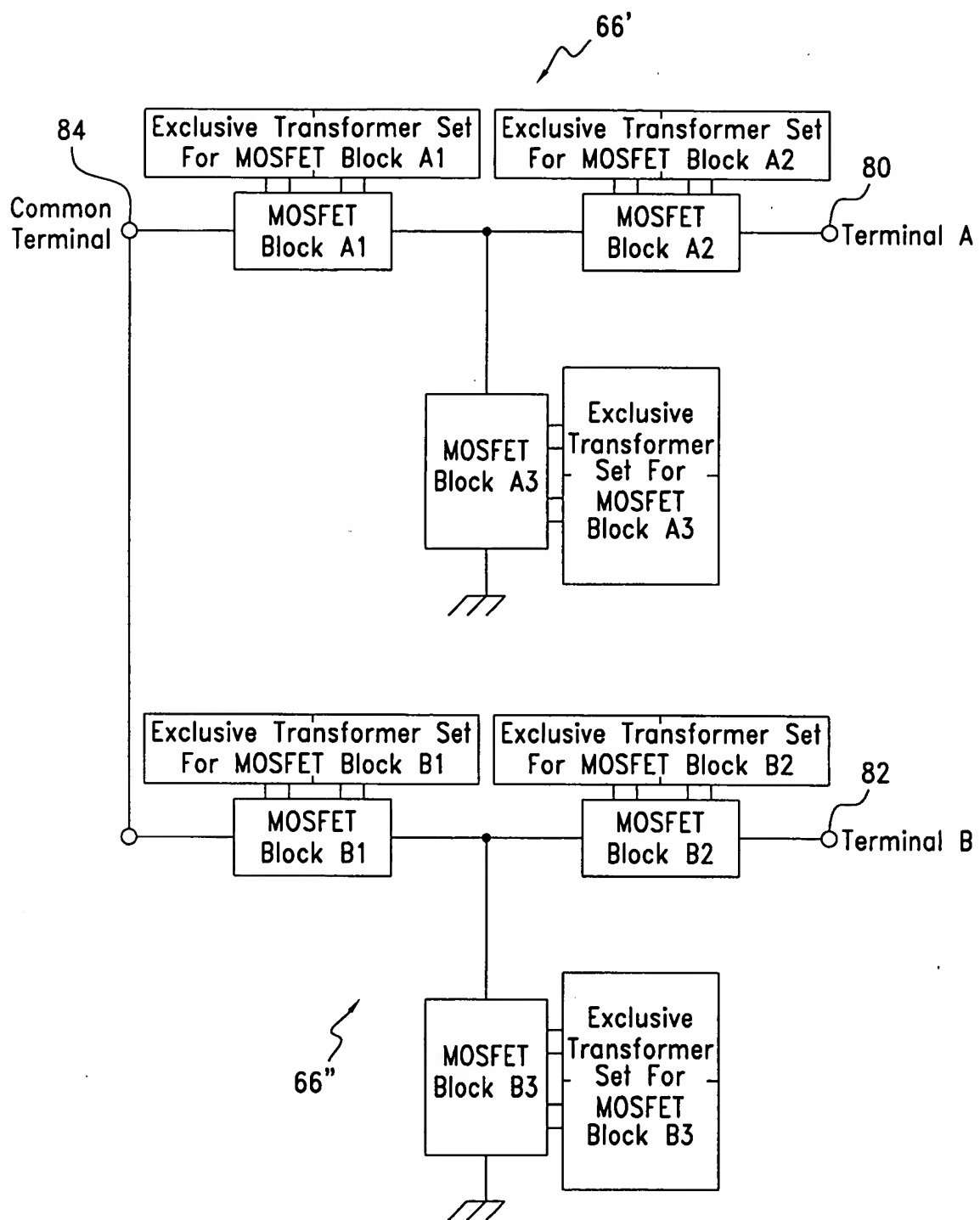


FIG. 10

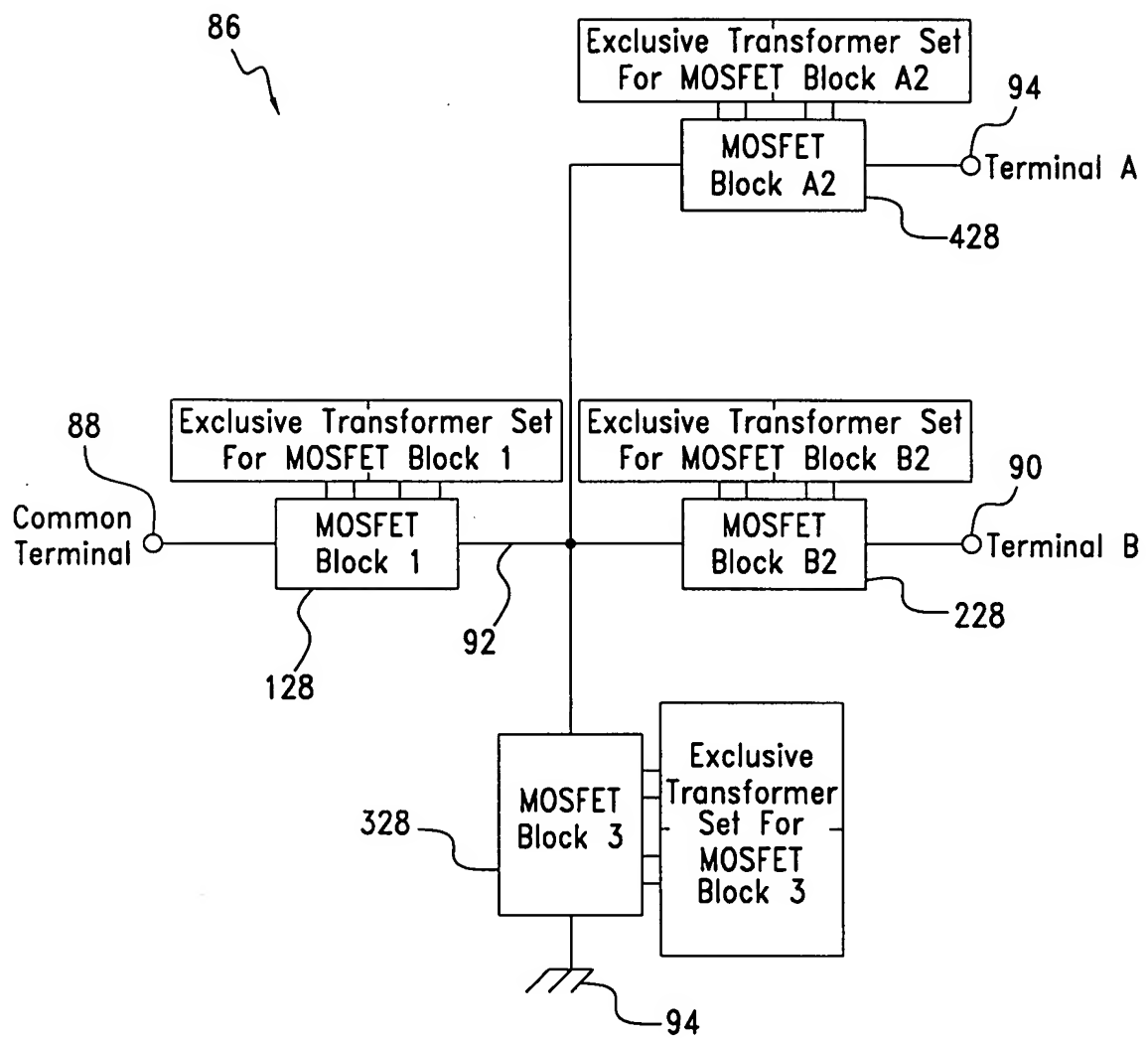


FIG. 11

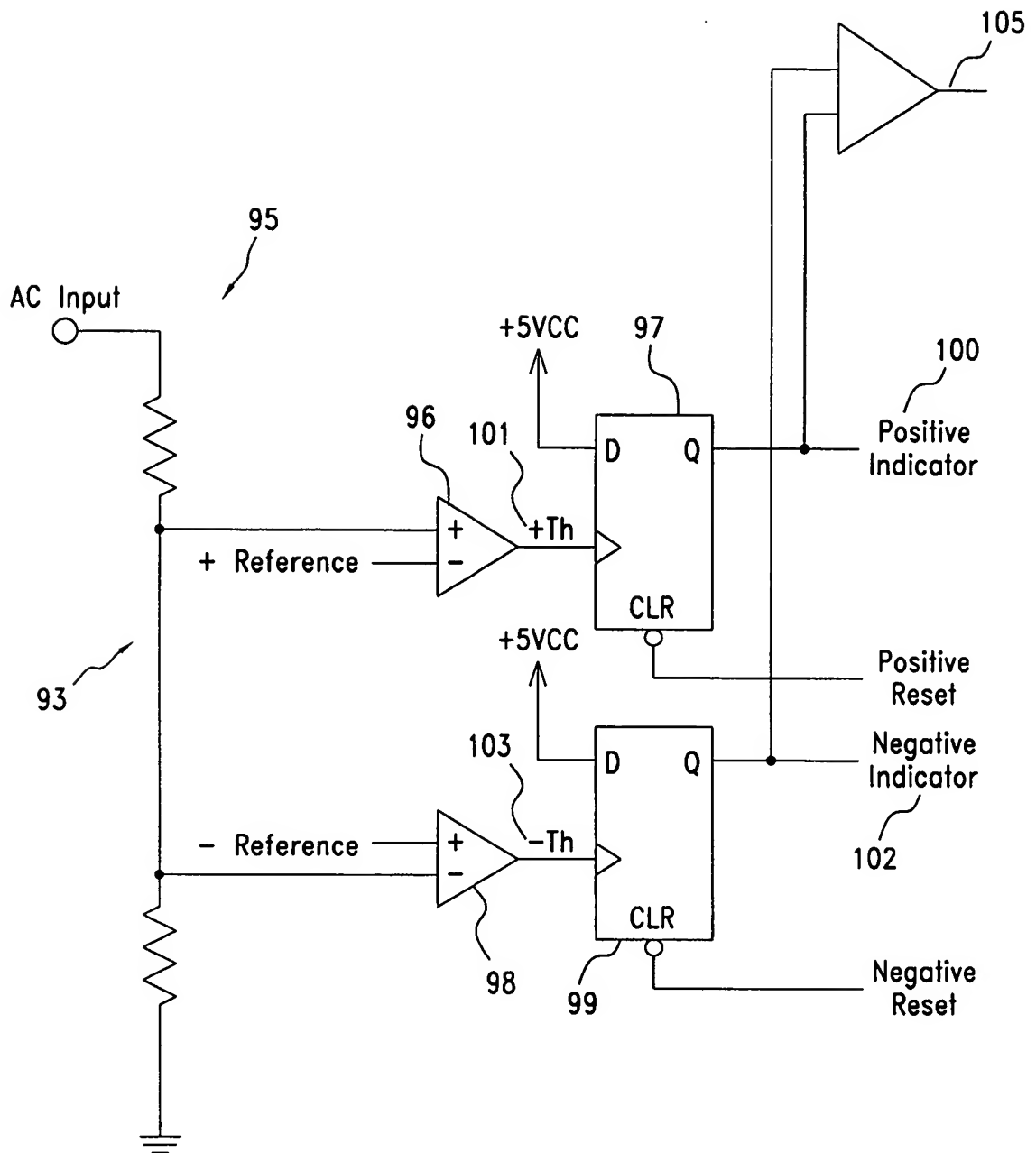
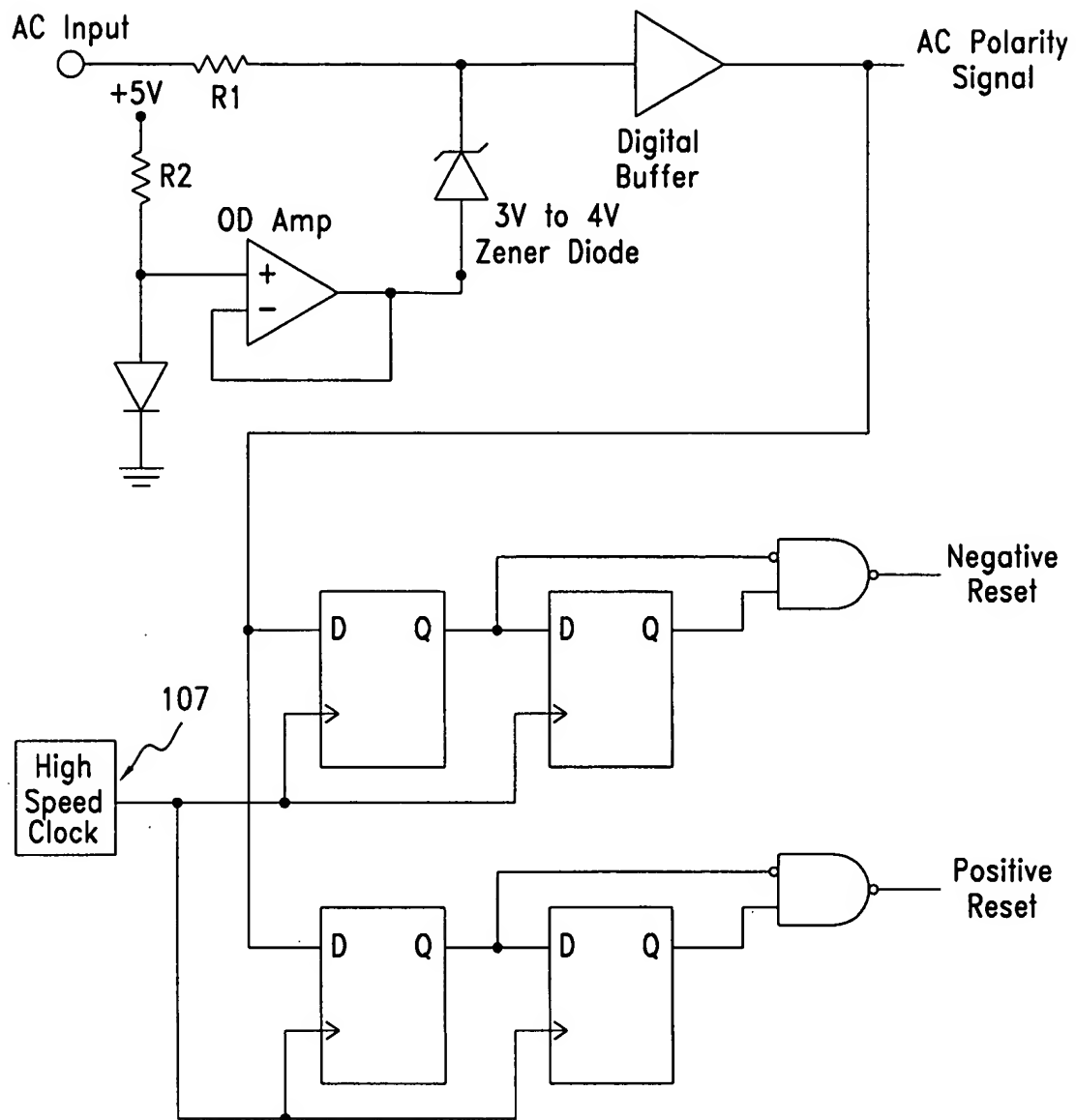


FIG. 12



104

**FIG. 13**  
AC Polarity Signal Circuit

**FIG. 14**  
AC Voltage Sense Waveforms

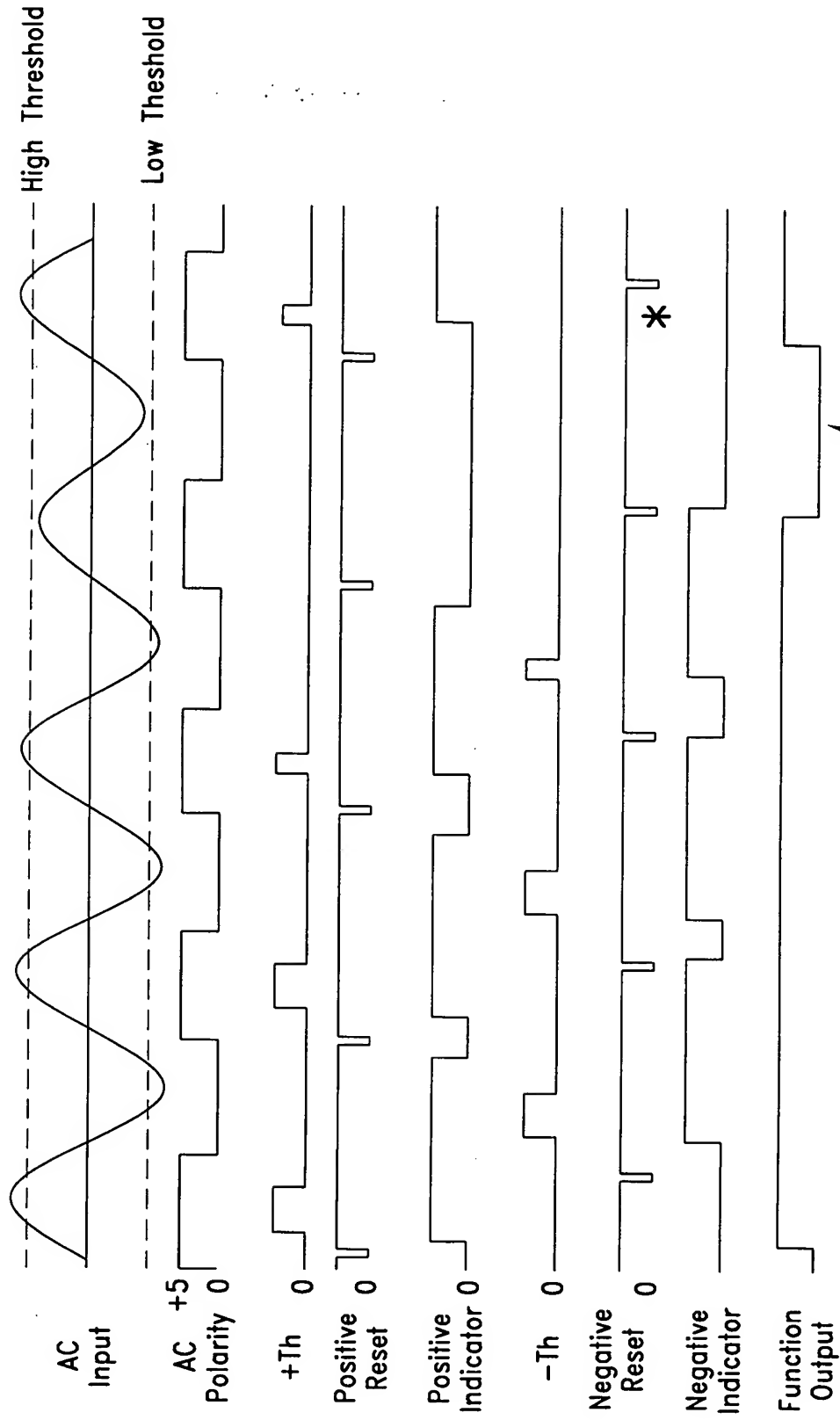
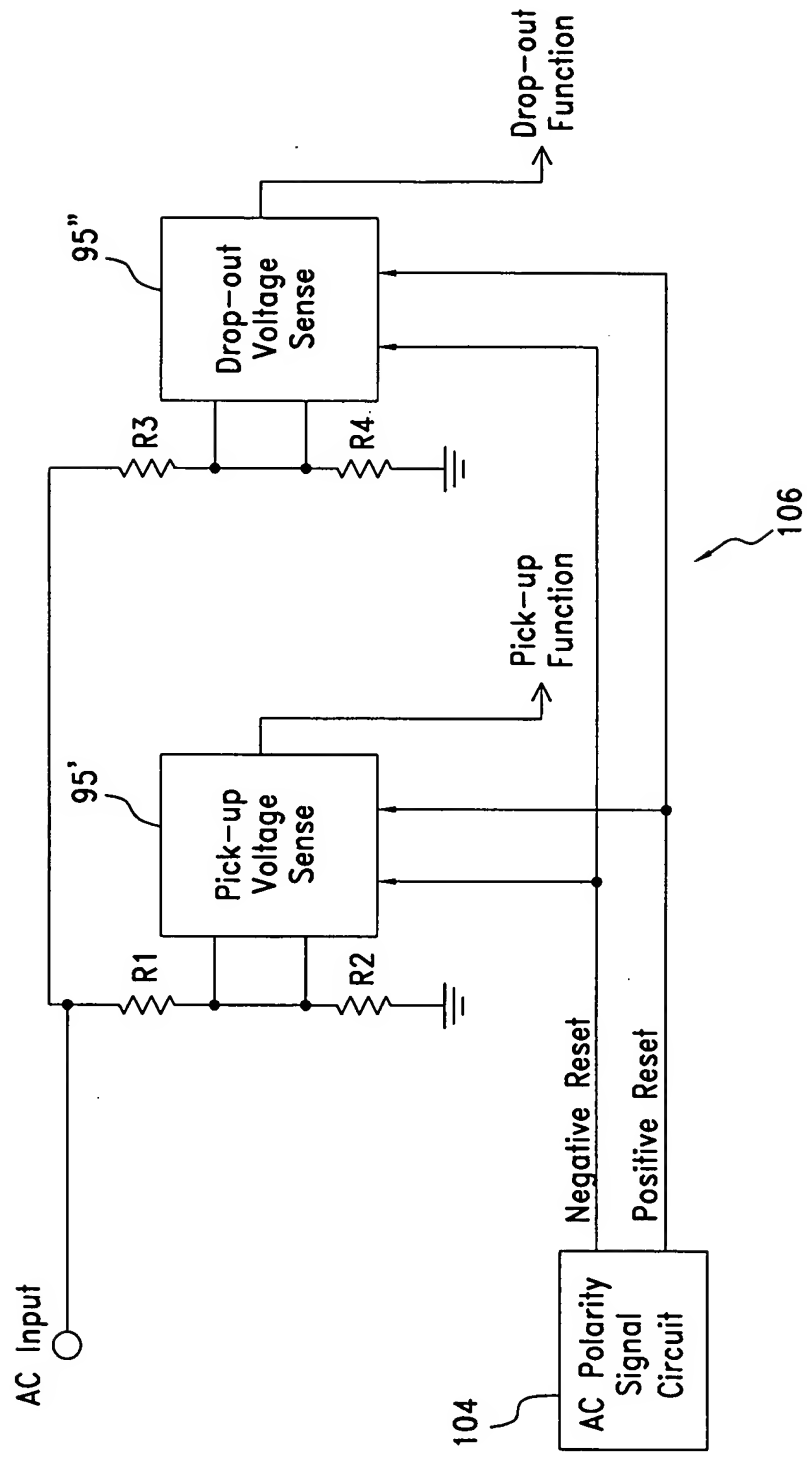


FIG. 15



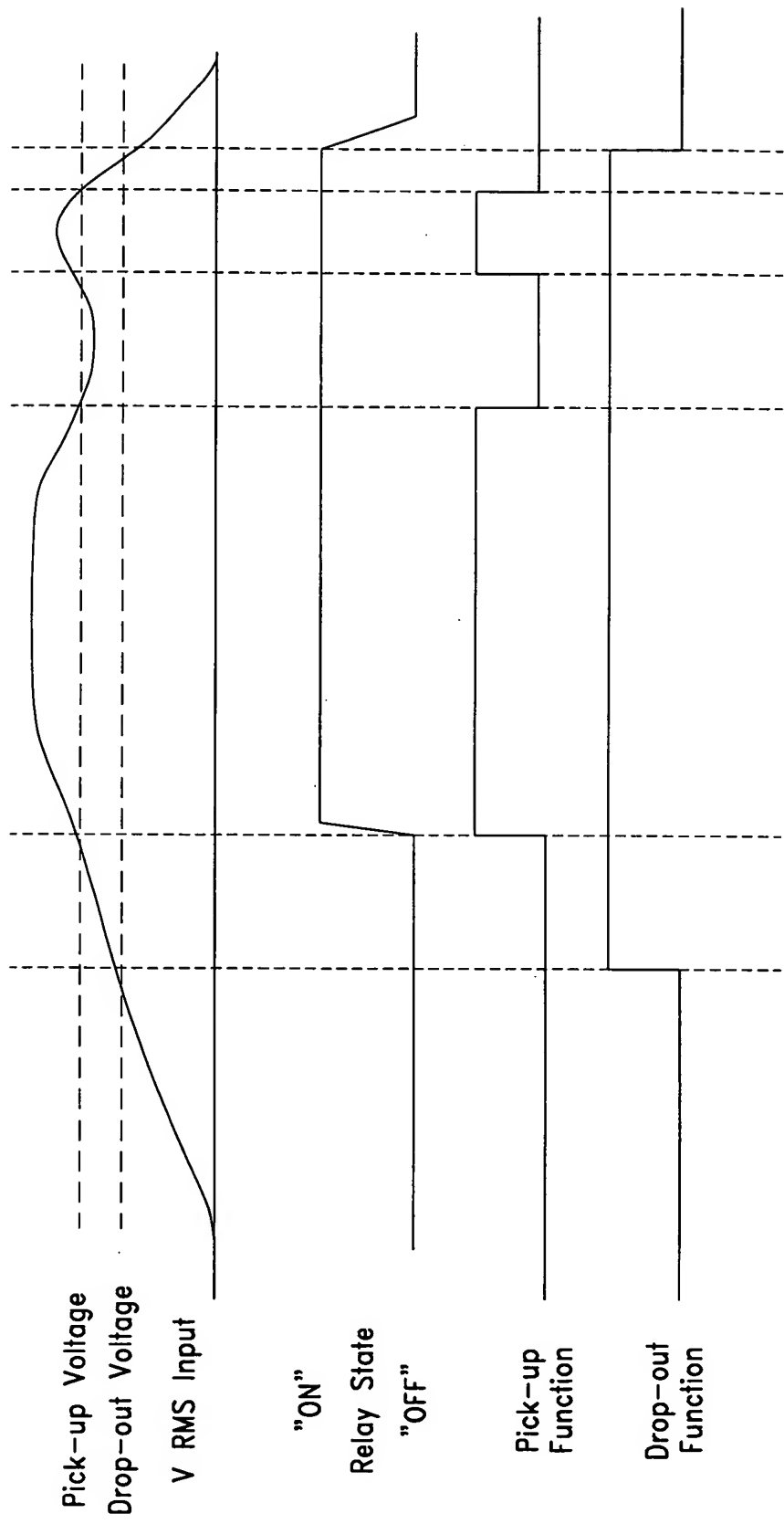


FIG. 16

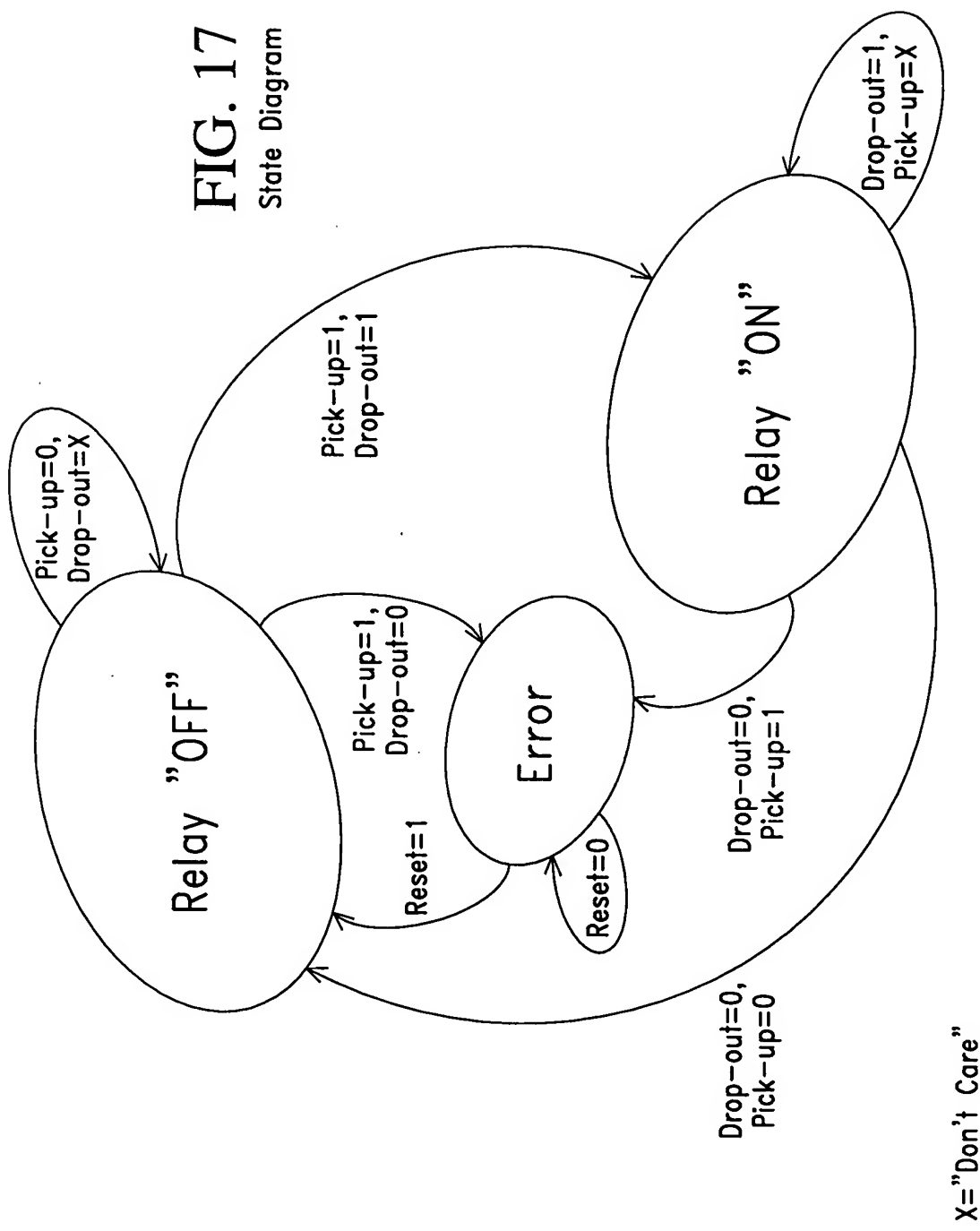


FIG. 17  
State Diagram



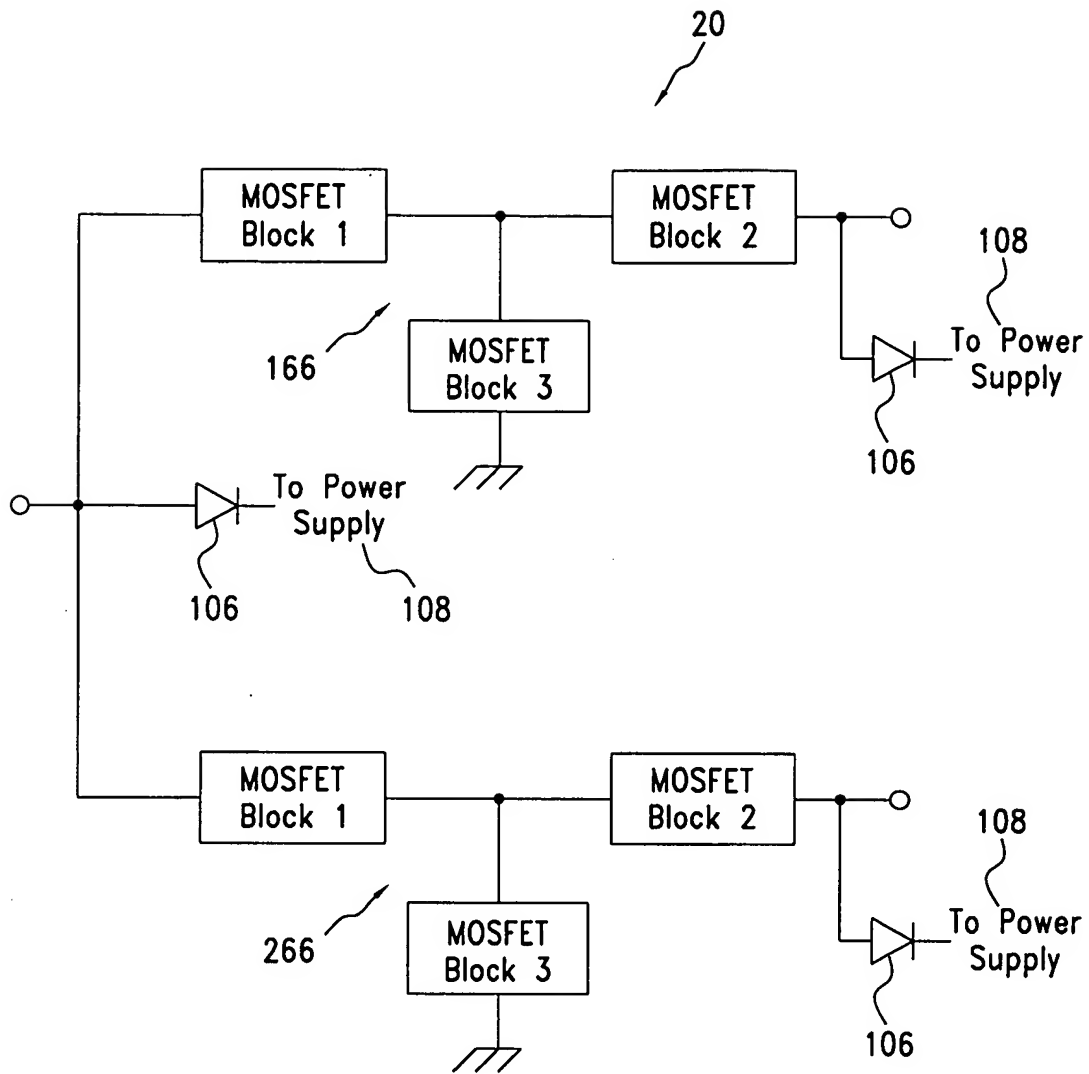


FIG. 18

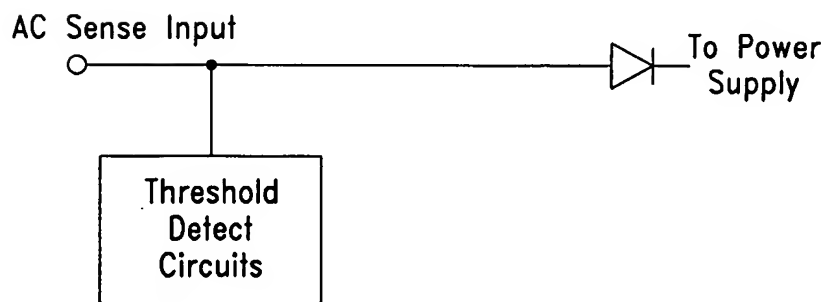


FIG. 18a

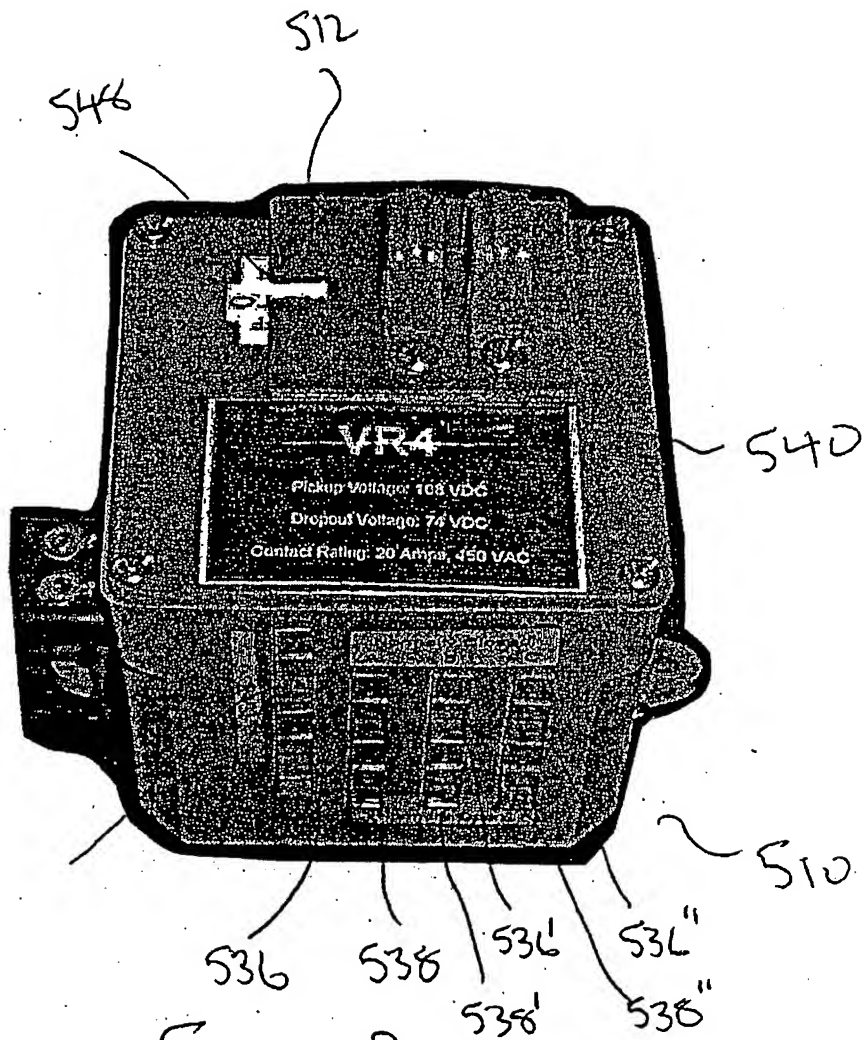


FIG. 19

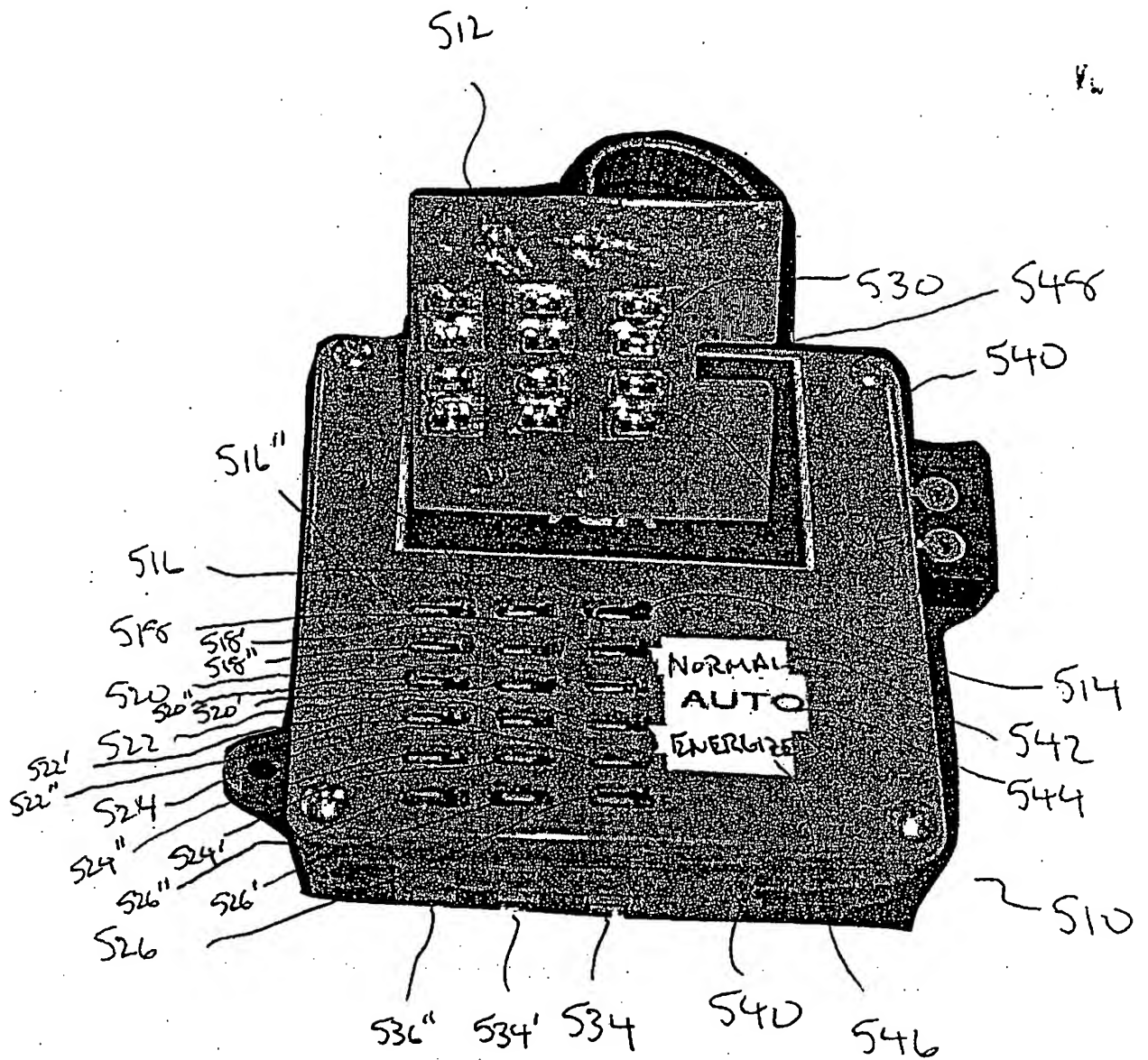


FIG. 20

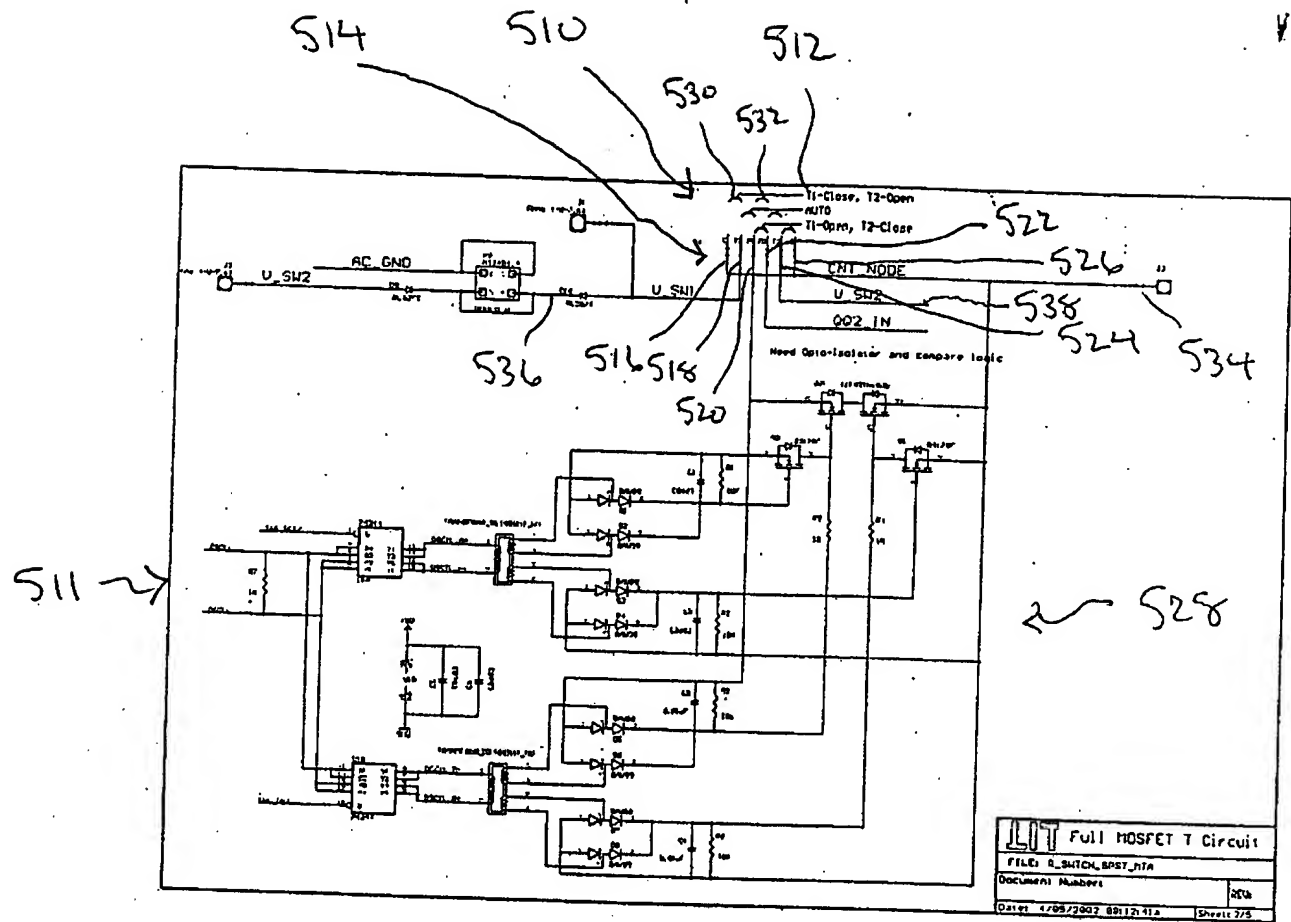


Fig. 21

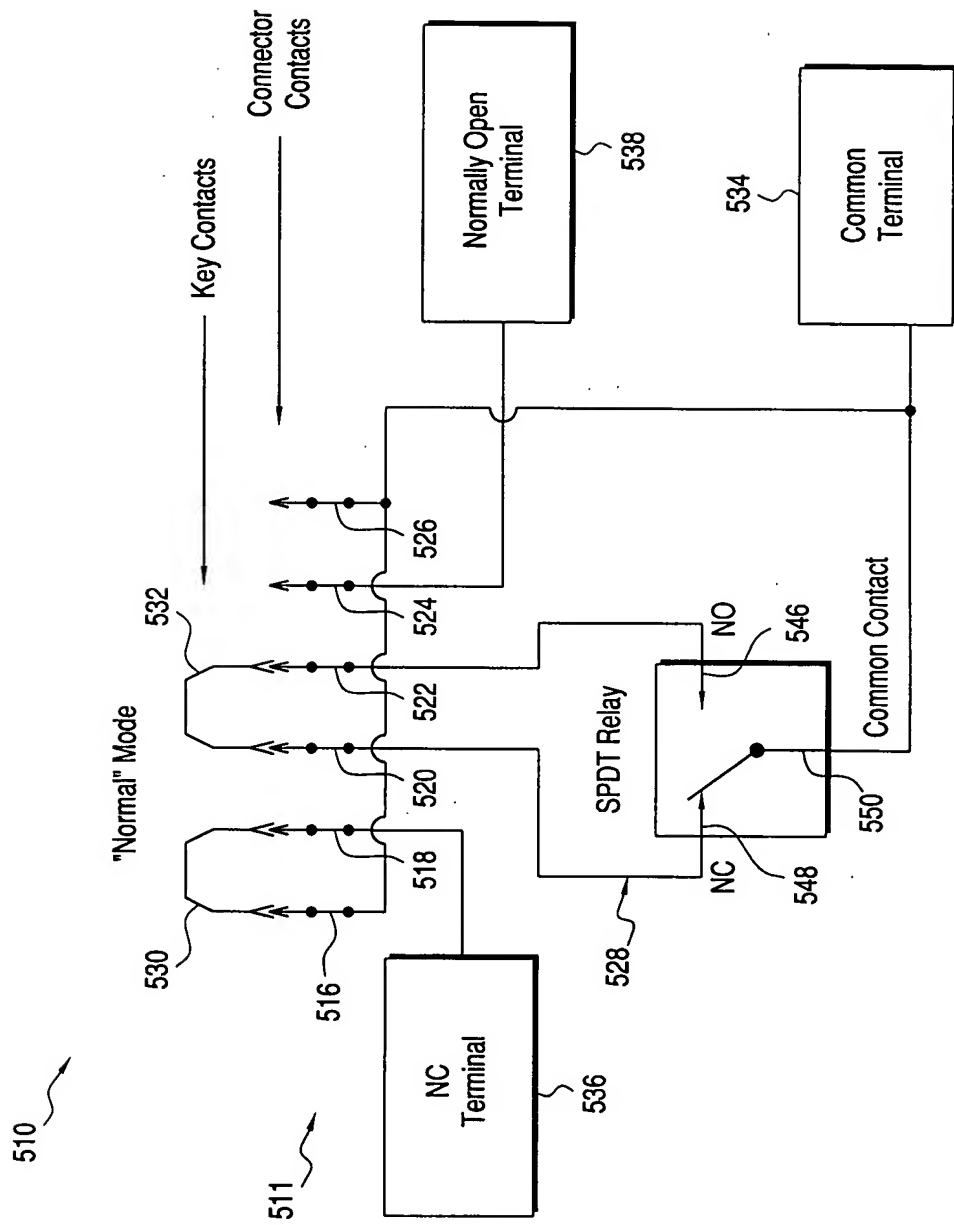


FIG.23

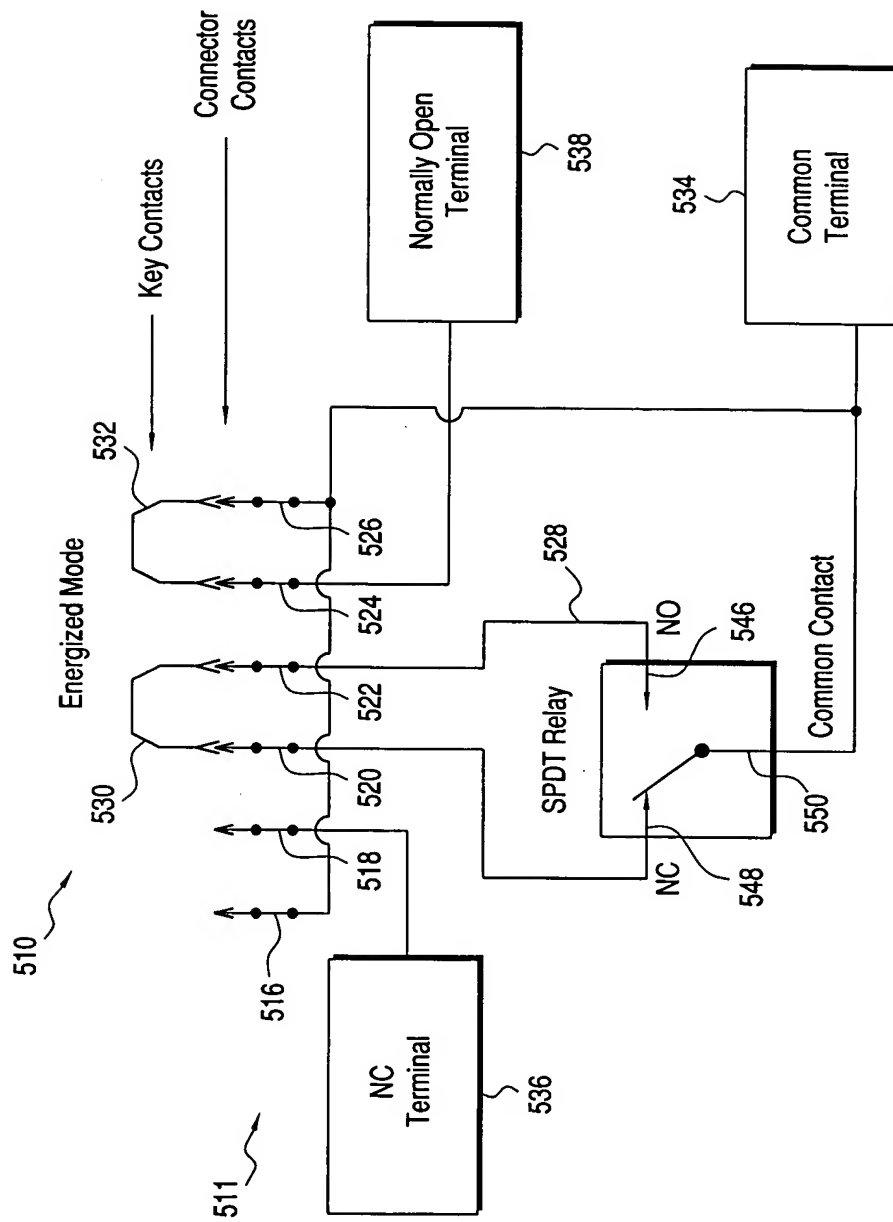


FIG.24

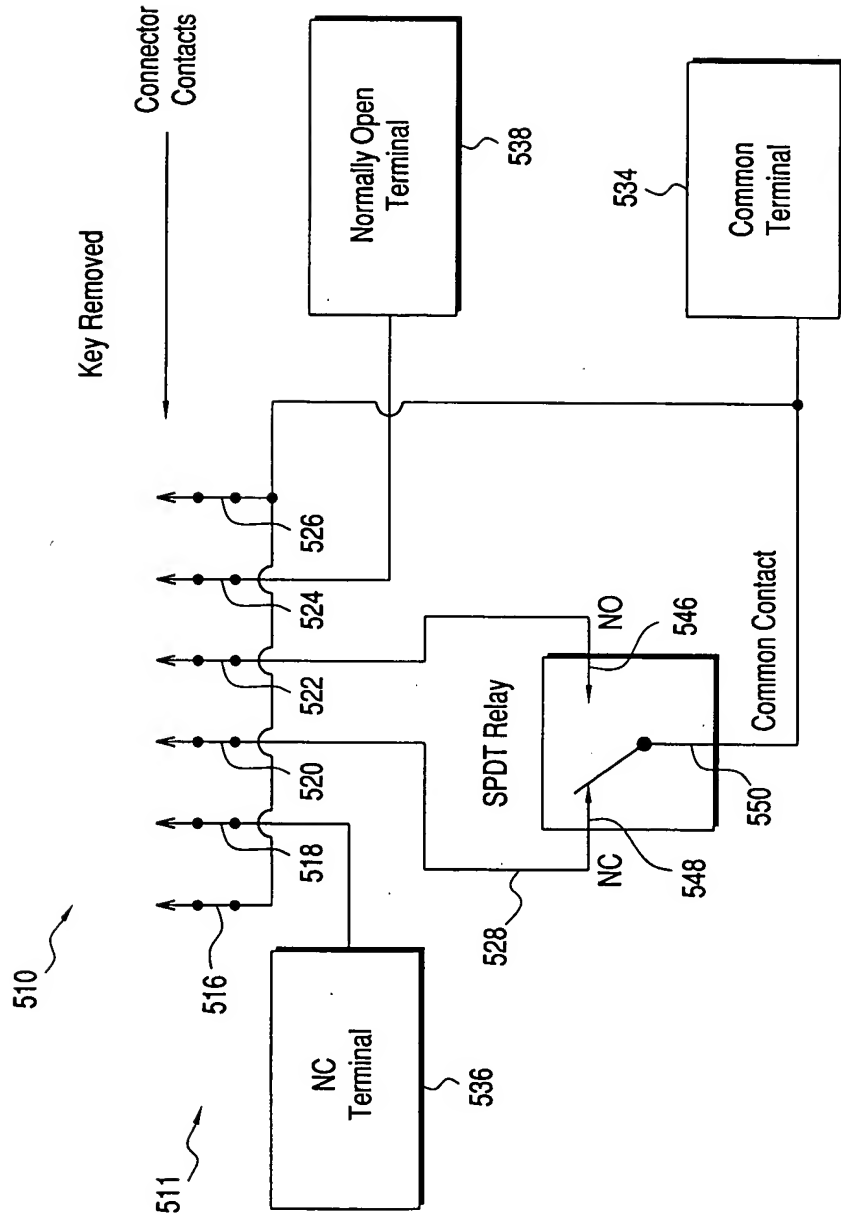
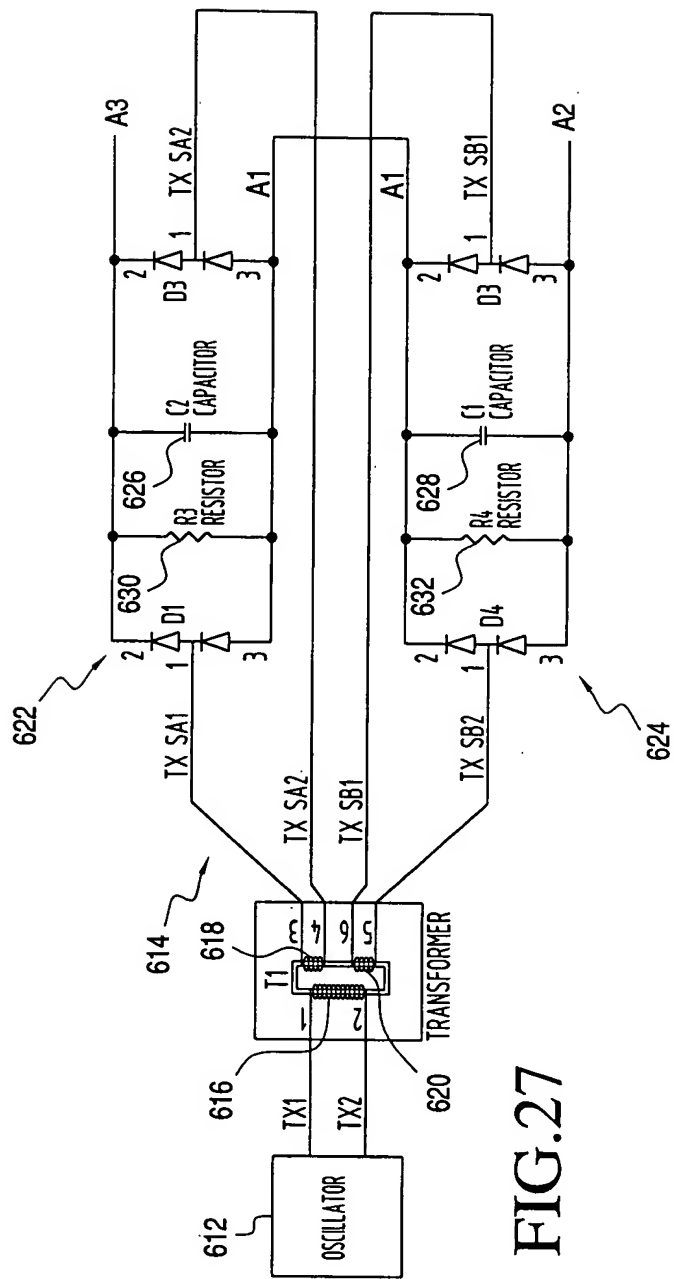
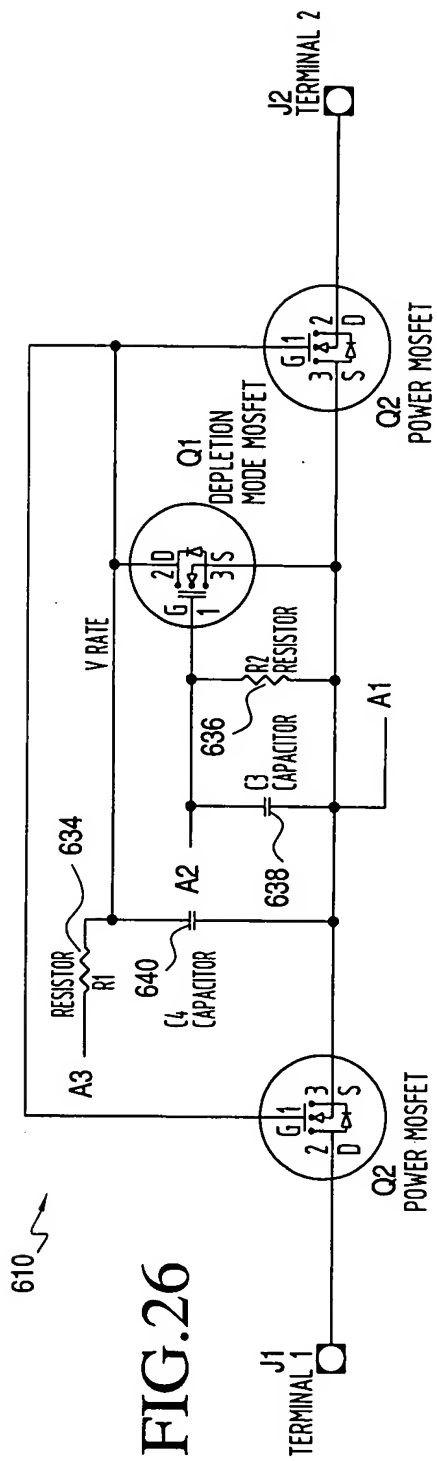


FIG.25





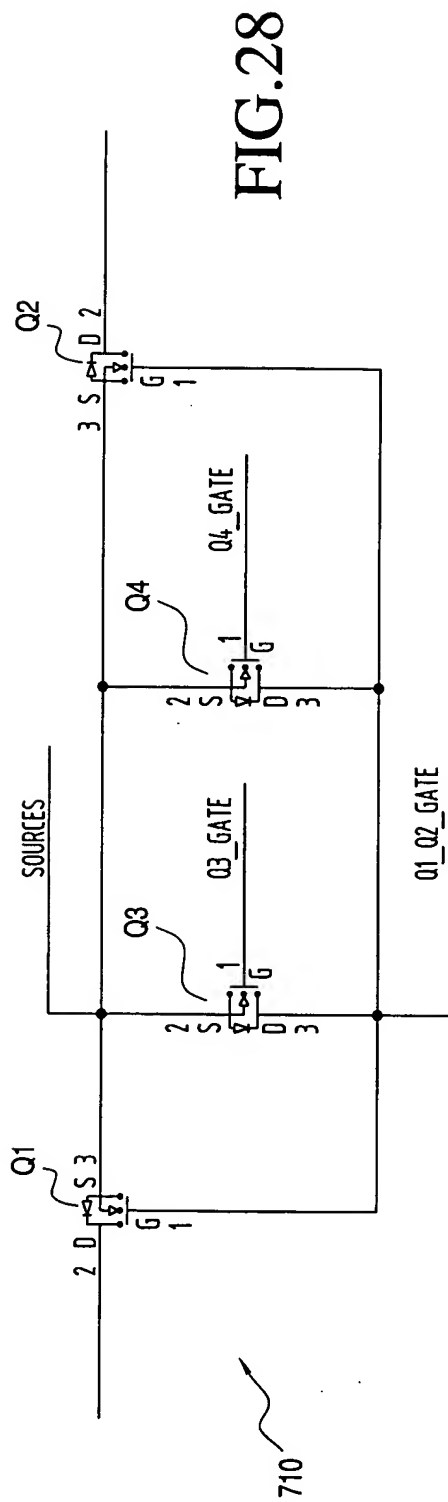


FIG. 28

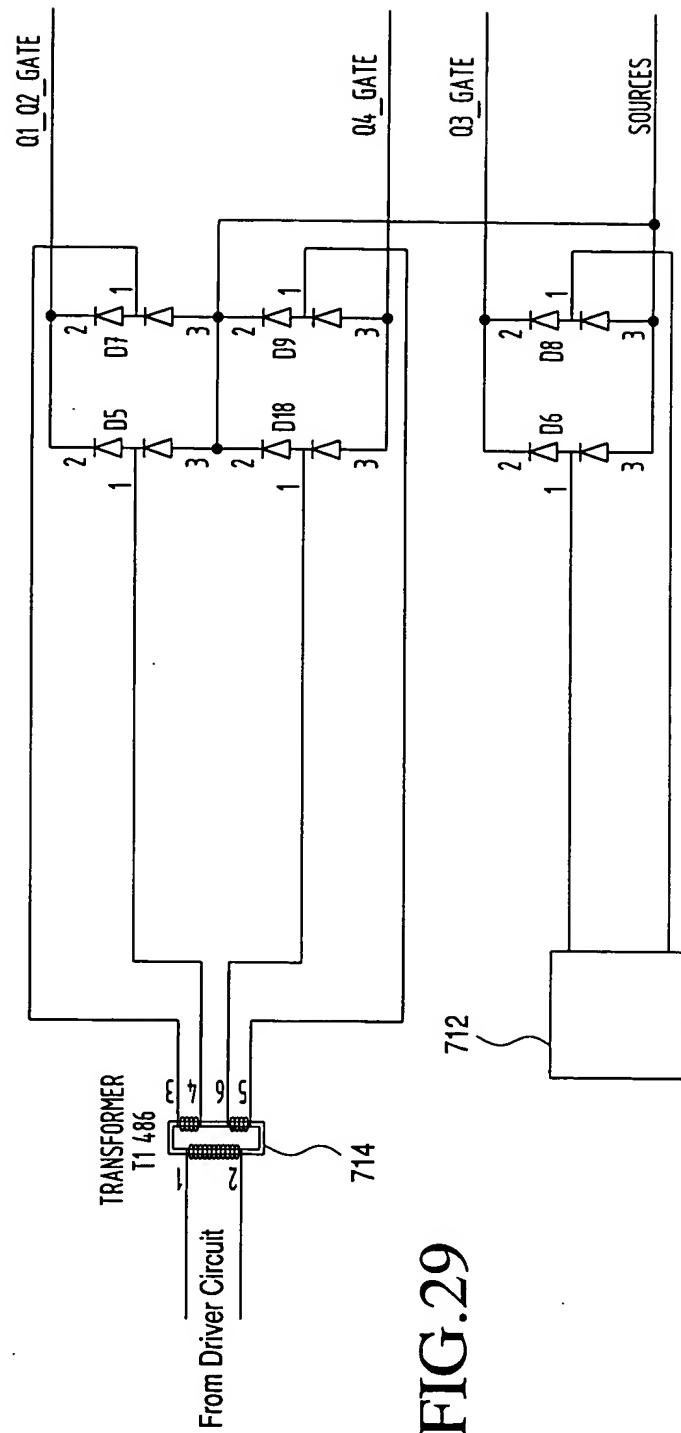


FIG. 29